

BOOK REVIEWS AND NOTICES

by

J. H. WILLIS.

1. Know Your Trees and Shrubs (A Southern Hemisphere Garden Book).

By Richmond E. Harrison and Charles R. Harrison. 11" x 8 $\frac{3}{4}$ ". Pp. 199, colour plates 582. R. E. Harrison & Co., Palmerston North, N.Z., 1965. Price \$9 Aust.

The present volume (printed by Kyodo Co., Tokyo, Japan) complements its author's very popular *Handbook of Trees and Shrubs for the Southern Hemisphere*, but is larger and grander in every way. It is in effect a gallery of colour photographs, first assembled at his nursery as a horticultural guide to clients and for professional use, but now attractively offered to a much wider public. The 582 reproductions are arranged alphabetically, by genus, each item being accompanied by very brief notes on its main features of interest. It would have been helpful to include the countries of origin for every species (or genus, as the case may be), yet this information appears against relatively few plates. About one fifth (119 species) of the whole are Australian subjects, gratifyingly portrayed; yet one is surprised to find only four species of *Acacia* and four of *Eucalyptus*—the two largest genera in the Commonwealth—, whereas the much smaller genus *Banksia* is represented by no less than twelve beautiful studies. Perhaps wattles and gum-trees were deemed to have been adequately covered already in other pictorial works of reference. No Australian conifers figure among plates 562–582, despite the excellence and adaptability of such pines as *Araucaria bidwillii*, *Callitris columellaris* and *C. oblonga*. By far the largest part of southern hemisphere lands lie in South America (some 5 $\frac{3}{4}$ million square miles), and one might reasonably expect a large share of pictures to exemplify the almost boundless horticultural potentialities of this rich floristic region, certainly more than the 28 provided which may indicate how relatively few South American subjects are available in New Zealand gardens.

The suite of 16 South African proteas (Nos. 440–455) is magnificent, likewise the renderings of 22 camellias (Nos. 562–582), while *Arbutus unedo* (32) and *Euonymus europaeus* (241) are an artistic joy; but, among such a galaxy of exquisite forms and colours, it is difficult to single out any portrait for special praise. Choice of material to be photographed is not invariably good, however, and plate 540 (*Telopea oreades*) does little justice to the noble Gippsland Waratah—its foliage had been so chewed by insects that not a single leaf remains intact. A few plates are "off-centre", with resultant blurring of detail, e.g. the *Ceanothus* and *Caryopteris* portraits on page 47. Number 8 is certainly not *Acacia hakeoides*, as labelled, but resembles either *A. dodonaeifolia* or *A. ixiophylla*. Also, No. 432 can hardly represent *Prostanthera nivea* which habitually shows elongated branches and linear leaves; the plant figured is quite unfamiliar to the reviewer. Plate 543 ought to appear over its correct botanical name *Crinodendron hookerianum*. A little more care should have been devoted to accurate spelling of names. For instance, there are three errors in the titles to the four plates on page 151: *lanceolata*, *Trichinum* and *semidecandra* should read *lanceolata*, *Trichinium* and *semidecandra* respectively. On page 58 *Crotalaria "agitiflora"* should read *agatiflora*, while *Cratægus* is spelt in three different ways! *Merianthus* is an error for *Marianthus* on page 111. Nevertheless, these few blemishes detract little from the general high quality and usefulness of *Know Your Trees and Shrubs*, which is excellent value for the price; it warrants a place in every botanical and horticultural library of Australasia.

2. How to Know Western Australian Wildflowers—Part III.

By W. E. Blackall and B. J. Grieve. 8 $\frac{1}{2}$ " x 5 $\frac{1}{2}$ ". Pp. 459–595, i–lxxviii, colour plates 20–30. University of Western Australia Press, Perth, 1965. Price \$5 Aust.

After a lapse of nine years since appearance of Part II in the series "How to Know W. A. Wildflowers", it is a pleasure to receive and acclaim Part III which covers the Englerian sequence of families from *Onagraceae* to *Lamiaceae* (or *Labiatae*). Only the section *Solanaceae* to *Compositae* (excluding *Goodeniaceae* already treated in Part II) now requires to be done. In format the new part follows its predecessor closely; but the paper is thicker, the drawings if anything more elaborate and the price considerably higher—as one would anticipate from ever-rising publication costs and the provision of twice as many colour plates. This is a laudable achievement and will be indispensable to anyone attempting the identification of Western Australia's native flowers. The amount of individual research necessary for Professor Grieve to present in illustrative detail such extremely difficult groups as the *Epacridaceae* and *Verbenaceae* calls for high praise. Infinite pains have been taken to avoid errors in the spelling of names. Colour reproductions are generally faithful and clear enough, although the floral indefiniteness of *Leucopogon australis* (plate 23) and *Teucrium myriocladum* (plate 29) teach us little about these species. The well known Woolly Foxglove, *Pityrodia axillaris*, is described (p. 570) as having flowers "pink to claret red". Personally, the reviewer is acquainted only with a pale pink to lavender-hued form (as admirably depicted by Edgar Dell in C. A. Gardner's *Wildflowers of Western Australia*, p. 130 1959) and has never seen the vivid "Persian rose" plant painted for the frontispiece and dust jacket by Margaret Stones.

3. Descriptive Catalogue of West Australian Plants.

Edited by J. S. Beard. 8½" x 5½". Pp. 122, colour plates 16.
Society for Growing Australian Plants (Printed by
Surrey Beatty & Sons, Chipping Norton, N.S.W.), 1965.
Price \$1.20 Aust.

It is somewhat ironical that Western Australia, containing the richest and perhaps most interesting flora of the Commonwealth, should have remained until recently the State most poorly endowed with floristic handbooks. After Bentham's comprehensive *Flora Australiensis* (1863–78), more than half a century elapsed until C. A. Gardner published his *Enumeratio Plantarum Australiae Occidentalis* in 1931—a bare list of names (but with authorities and places of publication) for all vascular plants known from the West at that date. Then, in 1954, came Blackall and Grieses' monumental "How to Know" series, which still continues. Merely to write out a new census, incorporating all those additions and changes to nomenclature during three dozen years since the *Enumeratio*, would be no mean effort; but, to add notes on habit, habitat and distribution for each item, would pose a staggering task. Yet this has been accomplished in quite a slender brochure, issued by the King's Park Board, and its editor (Dr. John S. Beard) must be complimented upon such a notable achievement. Arrangement of plant families follows the Englerian system, but genera and species are both listed alphabetically for convenience. A botanist may be excused for wondering why the genera *Alyogyne*, *Hibiscus*, *Gossypium* and *Notoxylon* have been transferred from the family *Malvaceae* to *Bombacaceae*. Ferns, grasses and sedges have been omitted—but no statement to this effect is made in the introductory paragraph on page 1. Even without these groups, the list runs to some 5,000 species.

Nothing short of a miracle could eliminate all mistakes from a compilation of this magnitude. Errors in spelling are remarkably few; but there are some serious omissions, e.g.:

Page 2 (3rd column at foot of map)—The abbreviation "e" for Eyre District should be added.

Page 16—Add the extraordinary subterranean orchid, *Rhizanthella gardneri* Rogers.

Page 27—Add the endoparasite *Pilostyles hamiltonii* C. A. Gardn.

Page 29—Add *Roycea pycnophylloides* C. A. Gardn. and *R. spinescens* C. A. Gardn.

- Page 40—Add *Acacia merinthophora* Pritzel.
 Page 98 and 99—Add at least 7 species of *Eremophila*.
 Page 99—Add *Myoporum platycarpum* R. Br.
 Page 113—Add 3 species of *Pithocarpa*.
 Page 114—Add *Sonchus megalocarpus* (Hook.f.) J. M. Black and *Stuartina muelleri* Sond. ex Schlechtendal.

Several other entries call for deletion, as being either synonyms or wrongly recorded for the West. Although it is clearly stated on page 1 that introduced species of all kinds have been omitted, one finds about a dozen weeds that are indubitable introductions, e.g. *Amaranthus albus*, *A. viridis*, *Nasturtium officinale*, *Diploaxis tenuifolia*, *Convolvulus arvensis* &c.

The book is enhanced by supplementary notes on the establishment of a "native garden", recommended plants for various needs, and propagation techniques. A resplendent cover-photo of Red-and-green Kangaroo Paw is impressive enough, but most of the other 37 colour prints (inserted throughout the text) suffer from a smudginess for which the original photographers are certainly not to blame. The picture opposite page 34, purporting to represent a *Carpobrotus*, looks much more like *Disphyma australe*. Until some kind of a State flora is published for Western Australia—and the possibility seems quite remote—this present *Descriptive Catalogue* will fill a useful role indeed and, at such a very modest price, it will be in great demand by lovers and growers of the Western flora.

4. Supplement to J. M. Black's Flora of South Australia.

By Hansjoerg Eichler. 9½" x 6". Pp. 385. Government Printer, Adelaide, 1965. Price \$1.60 Aust.

One would have thought that, after the revised and much enlarged edition of Black's *Flora of South Australia* (1943–57), very little must remain to be corrected or added to the nomenclature of vascular plants in that State. But "science marches on", and how far such an assumption was from the truth can be gauged by the size of Dr. Eichler's monumental supplement—equivalent in thickness to one half of the complete *Flora*! As stated in his Preface, the purpose of the new book is to "add information . . . on the systematics, distribution and nomenclature of the vascular plants occurring wild in South Australia". This objective has been consummated in a most businesslike, detailed and accurate production that will be invaluable to botanists all over Australia (and beyond) for a long time to come. The author goes through Black's *Flora* (second edition), page by page, and makes every necessary amendment, special attention being given to correct author citations. Previous unsatisfactory keys for genera in the *Pinaceae*, *Loranthaceae*, *Ranunculaceae*, *Oxalidaceae*, *Onagraceae*, *Solanaceae* &c., are replaced by entirely new ones, and a detailed key to *Bassia* forms an addendum. These changes result from recent revisional studies by specialists in the groups concerned. A full Index to Scientific Names rounds off this extremely critical book. Dr. Eichler has been a stickler for the adoption of original spellings, but some workers will doubtless dispute his replacement of the long-familiar *Lagenophora* by *Lagenifera* Cass. and *Brachycome* by *Brachyscome* Cass.. The creation (on page 332) by Dr. Loutfy Boulou, Cairo, of a new genus, *Embergeria*, to accommodate the native Dune Thistle (*Sonchus megalocarpus*) is open to question; the only characters—leaf texture and achene size—by which *Embergeria* is said to differ from *Sonchus* hardly impress one as being generically significant.

5. Growing Australian Plants.

By Noel Lothian and Ivan Holliday. 8½" x 5¼". Pp. 166, colour reproductions 32 (on 8 plates). Rigby Ltd., Adelaide, 1964. Price \$3.75 Aust.

An encouraging sign is the avidity for printed guides by increasing numbers of Australian home-gardeners who attempt the cultivation of our indigenous plants. Their efforts will doubtless be aided by the small volume now under review; but

it is felt that a more definitive title would have been "*Growing Australian Trees and Shrubs at Adelaide*". The authors are preoccupied, almost entirely, with the suitability or various woody species for the Adelaide environment, where predominantly calcareous soils and not particularly favourable climatic factors have a restrictive influence. However, Chapter 9 does mention a handful of herbaceous plants, while the succeeding nine pages give the essentials of propagation techniques and general garden planning. Chapters 2 to 8 (inclusive) set out the physical conditions obtaining in seven widespread types of country, ranging from the Mallee to Alpine Regions and Sub-tropical Rain Forest. Plants typical of each region are arranged alphabetically, with descriptive notes and some indication of distribution. To list (in Chapter 4) such trees as *Eucalyptus cinerea*, *Exocarpos cupressiformis* and *Hakea laurina* as typical of "Temperate Rain Forests" is surely misleading, and it is hard to understand just why *Brachychiton acerifolius* (page 135) should be classified under "Monsoonal Trees", extending as it does from Illawarra district (N.S.W.) only into southern Queensland. *Macadamia integrifolia* and *M. tetraphylla* are the two best cropping species of Queensland Nut, yet neither is mentioned in the notes on this important genus (p. 131). References to *Nothofagus* (p. 47) and *Bauera* (p. 61) imply that only two species of each are known to occur in the Australian region, ignoring the existence of third members—deciduous *N. gunnii* on Tasmanian mountains, and *B. capitata* of the Hawkesbury sandstone country, N.S.W.

Obsolete names are retained for several entities, e.g. *Podocarpus alpina* instead of *P. lawrencei* and *Richea gunnii* instead of *R. continentis* on page 124. Altogether, it would appear that the authors did not avail themselves of current botanical literature. Consistent mis-spellings are exemplified by "*Calythrix*" (pp. 115 & 159), "*Drymis*" (pp. 122 & 160), *Hakea* "*buckulenta*" (pp. 105 & 162), *Helichrysum* "*thysodeum*" (pp. 123 & 162) and *Hibbertia* "*ascicularis*" (pp. 80 & 162). Colour plates are fairly true to form and register, although sometimes with subject-matter too distant or crowded. No one would recognize *Ewartia nubigena* from the plate facing page 7, which offers us a globular green cushion. For a book of only 166 pages, costing 3.75 dollars, there are an inordinate number of mistakes.

6. South Australian National Parks and Wild Life Reserves.

Edited by Bernard C. Cotton. 9½" x 6". Pp. 190, plates 16 (5 in colour), text figs. 57. Government Printer, Adelaide, 3rd. ed. 1964. No price.

This valuable handbook, now in its third edition, is a mine of information on the history, geology and biological facets of South Australia's permanent reserves, especially the small National Park areas on the Mt. Lofty Ranges. It is in the nature of a symposium by various acknowledged specialists, is well put together and attractively printed on art paper, and the many excellent photographic illustrations are a delight. Of particular interest to a botanist are the chapters on general vegetation, orchids (with good line drawings for every species), trees and fungi. Professor Sir John Cleland provides a full census to the plants of the Mt. Lofty Ranges. Two of the five colour plates are from paintings by Miss Alison Ashby—*Grevillea lavandulacea* and *Banksia marginata*—and the cover design is a pleasing watercolour reproduction of a gum-lined creek. As stated in a contemporary review for the *South Australian Naturalist* (Sept. 1964) by C. T. James: "This book should be on the shelves of all South Australians interested in the natural history of their State.—Doubtless many visitors will be led by it to greater horizons of enjoyment and interest." Copies may be obtained from the South Australian Museum, Immigration Publicity and Tourist Bureau at Adelaide, or from either of the Belair and Para Wirra National Parks.

7. The Vegetation of Wyperfeld National Park.

By J. Ros. Garnet. 8½" x 5½". Pp. 95, half-tone photographs 23, line drawings of species 100. Field Naturalists Club of Victoria, Melbourne, 1965. Price \$1.50 Aust.

Any pioneering venture to stimulate interest in, and appreciation of, our native flora is praiseworthy, and high marks must go to the publication cited above. Never before has there been a separate book or booklet on the vegetation of a Victorian State Park; but Mr. Ros. Garnet's account of the plant-life at Wyperfeld—Victoria's largest National Park, of 139,760 acres—sets a commendable standard for similar surveys of other State reserves for flora and fauna. After his introductory remarks, the author limns in those background features (gum-fringed watercourses, box flats, claypans, sandhills and intervening troughs) that immediately impress the visitor, then goes on to describe in popular vein the principal formations and ecological communities involved. A brief history of botanical exploration in Wyperfeld district precedes the more utilitarian part of the handbook, viz. a series of line sketches for 100 species that are conspicuous in the reserve. More than one quarter of the whole indigenous vascular flora is covered by these helpful drawings which include all 14 *Acacia* species and seven of the ten eucalypts. An accompanying check-list gives, in systematic order, the names of every native and introduced plant known to date from the Park, their accepted vernaculars, the habitats, the collectors and times of initial records. An index to scientific and common names and a folding map complete the brochure. Such information really provides a good cross-section of mallee vegetation in general.

With the exception of Desert Heath-myrtle (p. 15), half-tone photographs are clear and attractive; but the cover-picture in colour, featuring *Calytrix tetragona* is not nearly so arresting as N. Chaffer's flamboyant study of *Waitzia acuminata* that appeared on the cover of the N.S.W. Bank's staff journal "*Etruscan*" for Sept.-Dec. 1962, to herald a fascinating article on Wyperfeld by A. H. Chisholm. If there be any fault to find with the present book, it lies in the rather flimsy paper cover and stapling—unsuitable for much handling by an inquirer in the field—but that was not the author's responsibility, and a firm board cover would have increased the cost materially. Copies may be obtained from the Field Naturalists Club of Victoria, National Herbarium, South Yarra.

8. Gardening for Australians (Penguin Handbook AU 14).

By R. T. M. Pescott. 7" x 4¼". Pp. 231, plates 59, text figs. 8. Penguin Books Pty. Ltd., Ringwood, Vic., 1965. Price \$1.25 Aust.

There is no dearth of larger, expensive tomes on the principles and practices of gardening in Australia; but real need exists for authoritative books of digest- or pocket-size. R. T. M. Pescott's admirable *Penguin Handbook* (AU 14) will surely help to satisfy such a demand. Its 231 pages are packed with well-arranged useful information for the amateur (and not so amateur) gardener. Naturally there is a strong bias toward horticulture in temperate latitudes, but only a small fraction of Australia's population lives and gardens in the tropics. The 59 half-tone photographs are very largely drawn from subject-matter in the Royal Botanic Gardens, Melbourne, of which Mr. Pescott is Director; they are of good quality and arranged in four groups through the text. The reader is guided logically through the developmental stages of a typical home garden—from his selection of a suitable site, through a consideration of local soils, manurial requirements and equipment for various purposes, to the actual garden lay-out, planting and subsequent maintenance. Instruction is given on such special features as rockeries, pools, trellises, lawns, hedges and the modernization of old gardens.

Recommendations of appropriate plants are given for both the "changing garden" (annuals, bulbs, border and potted plants) and the "fixed garden" (trees, shrubs and perennial climbers), and the whole survey is topped off with a list of references for additional reading. If there be any significant omissions, they are the author's silence on the subjects of mulching which is so important in drier localities—both for conservation of soil moisture and as a deterrent to

weeds—and of pest control. Perhaps the latter subject is too vast to be grappled with in a book of such small dimension, but it would have been useful to learn how one should set about dealing with such frequent enemies as aggressive weeds, snails, eel-worms, earwigs, caterpillars, pear slugs, thrips, aphids, scales, leaf-curl, die-back, sooty mould and the various kinds of chloroses.

9. Shrubs and Trees for Australian Gardens.

By Ernest E. Lord. 9½" x 7". Pp. 462, half-tone photos 135, colour plates 15. Lothian Publishing Co. Pty. Ltd., Melbourne, 4th ed. 1964. Price \$14.70 Aust.

Mr. E. E. Lord's thick volume really qualifies for the status of an encyclopaedia on woody plants amenable to Australian horticulture, and it is by far the most comprehensive and up-to-date work of its kind. No introduction to the gardening public is needed, except a reminder that this fourth edition has been completely revised and much enlarged. There is a 50 per cent. increase in the number of species and varieties described—from 2,335 items in 1956 to 3,524 in the present book. Together with synonyms and common names, the index now contains a total of 6,651 entries, justifying the author's confidence that "virtually every garden grown variety of shrub and tree likely to be met with is here referred to and can be quickly traced through the comprehensive index system". Once again, those unrivalled pictures of the late Herbert T. Reeves (misquoted as "H. W. Reeves" on introductory page No. v) form the bulk of the illustrative material, and Professor J. S. Turner has contributed a very informative 9-page foreword on "The Living Plant". To use a familiar cliché, Lord's handbook is a "must" for every horticultural bookshelf worth consulting.

10. The Native Orchids of Tasmania.

By M. J. Firth. 8½" x 5½". Pp. 90, illust. to 80 species (half-tones and line drawings). Printed by C. L. Richmond & Sons Pty. Ltd., Devonport, Tas., 1965. Price \$3.25 Aust.

Every State except Queensland and Tasmania has had a popular guide to those ever-intriguing wildflowers the orchids. A strongly bound little volume, representing the fruit of 30 years' investigation, now fills this need in the latter region. Author M. John Firth is a horticultural officer in the Tasmanian Department of Agriculture, an enthusiastic naturalist and, above all, a keen lover of orchids. He has provided keys and ample descriptions to the 128 species of *Ochidaceae* known for the Island State, all but two kinds being terrestrial. Notes on habitat, distribution and flowering times are given, and the chapter-titles (e.g. "Mayflies, Mosquitoes and Gnats", as in Rica Erickson's *Orchids of the West*) serve to awaken curiosity. The key to *Prasophyllum*, that difficult genus of leek-orchids, is accompanied by drawings of the flowers (with analytical dissections) for all species—the work of Leo Cady, Kiama, N.S.W. Critical enlargements of column structure are also an aid to identification with *Thelymitra* species (the colourful sun-orchids). A greenhood motif adorns the frontispiece and dust-jacket. This excellent "book for the beginner" will be welcomed by an even larger circle of botanists, and should enjoy a steady sale in Tasmania for years to come. Fortunately, a similar work on Victorian orchids (by Miss C. E. Gray) has just appeared.

11. The Endemic Flora of Tasmania (First Monograph).

By Margaret Stones (colour plates) and Winifred M. Curtis (ecological text). 18" x 13". Pp. approx. 36, colour plates of approx. 40 plants. The Ariel Press, London, 1966. Price \$39.38 Aust. (+ postage 50 cents).

A much more ambitious, one might say "de luxe", project is the preparation of a series of five monographs on the endemic flowers and conifers of Tasmania. It is intended to depict in natural size about 200 subjects drawn from life by the

talented artist Margaret Stones. Dr. Winifred M. Curtis (University of Tasmania) is to supplement these magnificent colour plates with a botanical and ecological text, and the work will be sponsored by Lord Talbot de Malahide. The reputations of both delineator and botanist guarantee a superlative production, and subscriptions are now invited for *Monograph Number One* which it is hoped to publish later this year.

12. The Plants of the Australian Capital Territory (Technical Paper No. 21, Division of Plant Industry, C.S.I.R.O.).

By Nancy T. Burbidge and M. Gray. 9½" x 7". Pp. 136. Commonwealth Scientific and Industrial Research Organization, Melbourne, 1965. No Price.

A comprehensive work on the plant-life of the A.C.T. has long been a desideratum, and even a bare list of species does not seem to have been printed since 1919. Until publication of the illustrated handbook (now in course of preparation), Dr. Nancy Burbidge's "Synoptic account" of the flora will be most welcome. Her present contribution takes the form of a series of keys, first to plant families and then to included genera under which the principal species are mentioned, with brief notes on habitat. The 24 local species of *Acacia* and 21 of *Eucalyptus* are not specified; but both genera are covered in the author's separate illustrated booklets, *The Wattles* and *The Gum Trees* of the Australian Capital Territory (issued in 1961 and 1963 respectively). The key for ferns was contributed by Mr. Max Gray, and that for the larger fleshy fungi by Dr. C. J. Shepherd. It may appear unnecessarily ambitious to attempt any coverage of mosses and fungal growths in a work of this kind. The former group, however, is not very large in the A.C.T. (about 84 species) and has been rather well collected. Several mis-spellings appear among moss names, e.g.: *Sphagnum* "secundum" instead of *S. subsecundum*, "*Andraea*" for *Andreaea* and *Bartramia* "*papillosa*" for *B. papillata*. Strangely enough, no species of the large genus *Barbula* is on record yet for the Canberra region. As to fungi, the submission of such a simple key (to a few "genera") now amounts almost to naïveté. The all-important criteria for delimiting genera (hyphal structure, spore ornamentation, cystidia and chemical reactions) are not even mentioned. Until the vast fungal flora of Australia becomes much better known, it seems premature to give regional lists of genera; so often the names used by older workers, with traditional concepts, have little meaning in the light of modern subdivisions and re-classifications. Some reference to former floristic writings on the A.C.T. would have been helpful, particularly to that of R. H. Cambage—"Notes on the Native Flora of New South Wales. Part X The Federal Capital Territory" in *Proc. Linn. Soc. N.S.W.* 43: 673-711 (Mar. 1919), which contains a full check-list of the indigenous vascular flora.

13. Taxonomy and Nomenclature of Eucalypts (Leaflet No. 92, Forestry and Timber Bureau).

By R. D. Johnston and Rosemary Marryatt. 9½" x 6". Pp. 24. Commonwealth Government Printer, Canberra, 1965. No price.

In the 30 odd years since publication of W. F. Blakely's *Key to the Eucalypts* many new species have been described and revisional studies by various specialists have resulted in critical re-appraisal of certain taxa. Some groups have been further subdivided, some fused, and other "species" of Blakely recognized as natural hybrids or clinal phases. The large number of name changes involved is making it increasingly difficult, if not bewildering, for the forester, nurseryman and non-specialising botanist to name their eucalypts with any certainty. Fortunately, all the taxonomic and nomenclatural changes published since Blakely's *Key* have now been brought together in the slim pamphlet cited above. This very useful collation lists alphabetically all species of *Eucalyptus* (together with infraspecific taxa) now accepted; their corresponding Blakely numbers appear at the left-hand margin, while on the right-hand side are relevant remarks on status and previous treatments of taxa.

14. **The Thelephoraceae of Australia and New Zealand** (Bulletin No. 145, New Zealand Department of Scientific and Industrial Research).

By G. H. Cunningham. 11" x 8½". Pp. 359, half-tone plates 5, text figs. 200. Wellington, N.Z., 1963—posthumous. Price \$8.12 Aust.

Comprehensive monographs on large groups of fungi are all too infrequent in the Australian region. Dr. G. H. Cunningham's account of the family *Thelephoraceae* in Australia and New Zealand was particularly welcome, but it is regrettable that this fine publication should have appeared eight months after the author died (18 July 1962). Great credit is due to the staff members of the Plant Diseases and Fruit Research Divisions, D.S.I.R., Auckland, who attended to the proof reading and completed the index for this book. One new genus and 20 new species are among the 261 species described in detail, and for each of them the type locality, world distribution, habitat and known range in Australasia (chiefly New Zealand) are given.

A most important feature is the series of 200 superb line drawings that serve to illustrate the hymenial and subhymenial structure of nearly all species at high magnification. Thus can be seen at a glance the spore details, basidia, paraphyses, setae, cystidia, fascicles, metuloids, hyphal vesicles and other microscopic organs of diagnostic value for various genera and species—all from the late Dr. Cunningham's pen. Some of these sections are startlingly beautiful, if complicated, objects. For instance, the fasciculate fan-like setae of *Hymenochaete dictator*, the parasol-shaped cystidia in *Tubulicrinis umbracula* and the fantastic turret-like fascicles of *Mycobonia disciformis* belie the often drab and uninteresting macroscopic appearance of these pliant or encrusting "leather fungi", bark fungi" &c. Excellently printed, the *Thelephoraceae* is furnished with a 6-page glossary, and it will be essential to a mycological library.

15. **Polyporaceae of New Zealand** (Bulletin No. 164, New Zealand Department of Scientific and Industrial Research).

By G. H. Cunningham. 11" x 8½". Pp. 304, half-tone plates 7, text figs. 59. Wellington, N.Z., 1965—posthumous. Price \$8.75 Aust.

This excellent companion volume to Dr. Cunningham's *Thelephoraceae* follows closely the size and format of its predecessor but is not nearly so comprehensively illustrated. It was prepared from a manuscript virtually completed by the author before his death, and the immense amount of editorial work again reflects high credit on those dedicated members of the D.S.I.R. (particularly Miss Joan M. Dingley, Plant Diseases Division) who saw it through the press. The title is perhaps a little misleading, for the monograph covers not only polypores occurring in New Zealand but those of the whole South-west Pacific, including Australia, New Guinea and Fiji. There are full descriptions to 242 species, with synonymies, distributional data and informative comments. The number of species known for all Australian States is 206 (113 being Victorian), and for New Zealand 143; only 5 species are recorded from Pacific islands but not from Australia or New Zealand. Three genera (*Flabellophora*, *Dendrochaete* and *Metuloidea*) and 13 species are published as new; but it is regrettable that *Dendrochaete* must immediately lapse into synonymy, duplicating as it does the circumscription of *Echinochaete* D. A. Reid that was recently published in *Kew Bulletin* 17: 283 (1963).

Dr. Cunningham has made a brave attempt to define genera more naturally than has been done in the past, and his classification—largely by hyphal systems, hyphal colour and spore-wall features—differs radically from that of previous workers in Australia. For instance, the 21 species of *Polyporus*, as presented in J. B. Cleland's *Toadstools and Mushrooms and other Larger Fungi of South Australia* Part 2: pp. 206–217 (June 1935), are variously assigned to

the following nine genera: *Polyporus* sens strict. (6 spp.) *Dictyopanus* (1), *Tyromyces* (2), *Coltricia* (2), *Grifola* (2), *Piptoporus* (2), *Inonotus* (2), *Phellinus* (1), *Fuscoporia* (1). It will surprise many mycologists to find that no true *Fomes* inhabits the Australian region; most of the species, previously so called, are referred by Cunningham to *Phellinus*.

It had been Dr. Cunningham's cherished hope to visit Australia and study our *Polyporaceae* in the field, but unfortunately his wish was never realized. He worked solely from dried Australian material, and his diagnoses sometimes fail to bring out the subtle characters observable only in living material. Thus *Osmoporus decipiens*, of dead *Casuarina* wood, is noteworthy for the pinkish-glaucous bloom on its pore surface—a feature omitted from the description of this attractive bracket-fungus on p. 248 of the monograph.

Despite a multiplication of genera (now 32) and numerous unfamiliar combinations thereunder, this long-awaited work gives a valuable survey of an appallingly difficult subject. The *Polyporaceae* are far more interesting and diverse than Thelephoroid fungi, and, thanks to the late Dr. Cunningham's genius, one can now reliably identify most S.W. Pacific species and be in a favourable position to evaluate any new records of the future. A formidable list of 322 "rejected and unknown species" is accompanied by annotations on pp. 264–283, serving to emphasize the utter confusion that has plagued nomenclature of *Polyporaceae* until quite recent times. The only previous publication embracing polypores of the whole Commonwealth was M. C. Cooke's *Handbook of Australian Fungi* (1892), a work described by C. G. Lloyd in his *Myths of Mycology* (Dec. 1917) as "perhaps the worst textbook on fungi that was ever published". Accepted names and synonyms (in *Italics*) are indexed at the end of the new book, in the form of alphabetically arranged specific epithets followed by appropriate genus. It is thus a simple matter to trace the origin and place of publication of any name mentioned in the text.

16. The Alpine Ranunculi of New Zealand (Bulletin No. 165, New Zealand Department of Scientific and Industrial Research).

By F. J. F. Fisher. 11" x 8½". Pp. 191, figs. 130 (drawings, maps and 7 half-tone photos.). Government Printer, Wellington, N.Z., 1965. Price \$8.75 Aust.

Although this work concerns only the 14 alpine representatives of New Zealand's 36 indigenous species of *Ranunculus*, it is one of the best and most attractively printed botanical monographs yet to appear in Australasia. Dr. Fulton Fisher has made an intensive study, both in field and laboratory, of his chosen subject over a number of years, and the method of presentation is a model for similar projects in the future. The five chapters deal with introductory techniques and approaches, distribution and variability, patterns of variation, phylogeny, and finally a taxonomic revision. Far more space is devoted to ecological, morphological and evolutionary considerations than to classical taxonomy. Some conclusions are not very clearly expressed and seem to verge on the esoteric; for example (p. 98): "it is believed that there are few obstacles to the reconciliation of the disjunct levels of the taxonomic hierarchy with the smoothly progressive sequence of phases of evolutionary divergence". Copious line-drawings and portraits illustrate every species, and intergrading leaf-shapes are shown for many hybrids; these are the work of a competent botanical artist, Mr. K. R. West. A particularly pleasing feature is the fine series of coloured maps to indicate distribution patterns, all land above 4,000 feet being shown in grey against white. Drawings of leaf-shapes and other anatomical characters have been delicately superimposed in black on the empty spaces of certain maps, which are all large enough to pin-point occurrences very accurately. This worthy treatise concludes with a 3-page list of literary references.

17. Trees of Victoria—an illustrated field guide.

By L. F. Costermans. $5\frac{1}{2}'' \times 4\frac{1}{2}''$. Pp. 80, central map, photographs 26, and line drawings throughout. Privately published, Melbourne, Aug. 1966. Price 50c Aust.

The late Dr. R. T. Patton's 48-page booklet, *Know your own Trees* (1942), served a very useful purpose as a popular introduction to Victoria's eucalypts; but it lacked sufficient illustrations and has been out of print for many years. In H. Oakman's "*Jacaranda Pocket Guide*", *Some Trees of Australia* (reprinted 1965), only ten of the 64 species described are indigenous to Victoria; so the book is virtually useless to residents there. A growing demand by Victorian naturalists, bush-walkers, schools, youth and other organizations for a simple yet reliable pocket-book to native trees (occurring commonly in various parts of the State) has now been satisfied.

As Dr. David Ashton remarks in his Foreword to *Trees of Victoria*, "here is a booklet which can be thoroughly recommended". The present reviewer concurs, and is amazed at the amount of meaty information so attractively offered in this excellent little brochure. For each one of the chosen six dozen trees there is a succinct but adequate description together with clear line drawing of essential features, and the illustrations accompanying every eucalypt species include a distribution map, profile-sketch of tree, both adult and juvenile leaves, mature buds and fruits. In its firm glossy cover, contrasting a wet and a dryish forest scene, the book is wonderfully good value for 50 cents; it is certain to sell quickly. The painstaking author must be complimented on the high quality and usefulness of his achievement.

18. The Lichens and Mosses of Mac.Robertson Land (A.N.A.R.E. Scientific Reports B (2)—Publication No. 82).

By R. B. Filson. $10'' \times 7\frac{1}{2}''$. Approx. 170 pp. including 40 plates in line and colour, 40 figures (embracing maps). Antarctic Division, Department of External Affairs, Melbourne, 1966. Price \$9.00 Aust.

This work, on sale last February, promises to be the most attractive publication yet issued by the Antarctic Division. The land flora of Antarctica is extremely limited, that of Mac.Robertson Land in the Australian Sector consisting of a few hardy cryptogams most of which are saxicolous lichens; but it is important that these be made known to the scientific world. Mr. Rex Filson, who spent a year at Mawson (and several months on Macquarie Island), has handled the lichen flora and only two known mosses in a masterful way, describing in microscopic detail all species discovered in the Sector to date, listing all known collections and providing a set of superb colour drawings that create a high standard for illustrative cryptogamic work in Australasia; six of the 26 lichen species—half belonging to *Buellia*—and one of the two mosses are published as new.

The cost is not excessive for such a project in a field of very limited appeal. One must congratulate both publisher and printer on their excellent presentation and superior materials used for the book.